

## REMARKS

Claims 1-3, 5-12, 14-19, 21-30, 32-39, 41-46, and 48-54 are pending in the application. Claim 9 is amended to correct a typographical error. Claims 4, 13, 20, 31, 40, and 47 are cancelled. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

If the Examiner relies on a new ground of rejection or a new reference in rejecting the claims in the next Office Action, a Final Office Action would not be appropriate since no amendments have been made to the claims. See MPEP § 706.07(a) – under present practice, Office Actions where the Examiner introduces a new ground of rejection shall be final only when the new ground of rejection is necessitated by Applicants' amendment of the claims.

## REJECTION UNDER 35 U.S.C. § 103

Claims 1-2, 5-8, 10-11, 14-16, 28-29, 32-35, 37-38, and 41-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pub. No. 2007/0078624 ("Shu") in view of U.S. Pub. No. 2005/0102671 ("Baumberger") and U.S. Pat. No. 7,464,138 ("Le"). This rejection is respectfully traversed.

Claim 1 recites that each respective one of a plurality of virtual machines **creates a copy** in a respective one of a

plurality of virtual machine queues of data in a processor queue when the processor is executing the respective one of the plurality of virtual machines. Claim 1 also recites that when the processor resumes executing a first of the plurality of virtual machines after executing a second of the plurality of virtual machines, the first of the plurality of virtual machines **copies the data** from the respective one of the plurality of virtual machine queues for the first of the plurality of virtual machines to the processor queue.

*A. Shu and Baumberger do not teach or suggest the "creates a copy" or the "copies the data" limitations as recited by claim 1.*

The Examiner agrees that Shu and Baumberger do not teach or suggest these limitations and therefore relies on Le.

*B. Le does not teach or suggest the "creates a copy" or the "copies the data" limitations as recited by claim 1.*

The system disclosed by Le is fundamentally different from a system according to claim 1, and these differences are reflected in the limitations of claim 1. As an overview, Le discloses a system having a shared queue and a mirror queue, where the mirror queue stores a copy of all of the data in the shared queue. See Abstract, lines 7-12. The mirror queue therefore serves as a backup if the shared queue experiences a failure. According to Le:

The mirror queue provides the system with continuity in case of an outage of the shared queue. In the

event of such an outage, each instance of an application can simply discontinue using the shared queue and process requests from the mirror queue. The mirror queue is used until the shared queue is once again available.

Abstract, lines 12-17.

By contrast, a system according to claim 1 implements multiple virtual machine queues corresponding to respective multiple virtual machines. Because the virtual machines all share a single processor, a processor queue stores data for the virtual machine that is currently being executed. While the virtual machine is being executed, the corresponding virtual machine queue maintains a copy of the processor queue. For example, while a first virtual machine is being executed, a first virtual machine queue is maintaining a copy of the processor queue. In this way, when the processor switches from executing the first virtual machine to executing a second virtual machine, the first virtual machine already has a copy of the processor queue. The contents of the processor queue can then be overwritten by the contents of the virtual machine queue for the second virtual machine.

Specifically, claim 1 recites that each respective one of a plurality of virtual machines creates a copy in a respective one of a plurality of virtual machine queues of data in a processor queue **when the processor is executing the respective one of the plurality of virtual machines.**

By contrast, Le discloses a single shared queue and a single mirror queue, where the single mirror queue maintains a copy of everything in the single shared queue. This behavior is consistent with the goal of Le, which is to have a backup, not to have separate virtual machine queues corresponding to separate virtual machines, as claim 1 recites. Le does not teach or suggest multiple virtual machine queues, as claim 1 recites, and therefore could not teach or suggest creating a copy of a processor queue when the processor is executing the respective one of the plurality of virtual machines, as claim 1 recites.

Claim 1 also recites that when the processor resumes executing a first of the plurality of virtual machines after executing a second of the plurality of virtual machines, the first of the plurality of virtual machines copies the data from the respective one of the plurality of virtual machine queues for the first of the plurality of virtual machines to the processor queue.

To the best of Applicants' understanding, Le is absolutely silent with respect to this limitation, and the Examiner has not identified any teaching in Le related to this limitation. In fact, the Examiner did not address the actual language of claim 1 when applying Le. The entire discussion of Le is as follows:

In the same field of endeavor Le discloses a queue management system applicable to any suitable common queue (e.g. a processor queue) and common queue server (e.g. processor). Le further discloses a plurality of systems 14 (e.g. system A and system B which would correspond to the claimed plurality of virtual machines) that share a common queue in the common queue server 20 (corresponding to the claimed processor queue). According to Le's disclosure a "Mirror Queue", i.e. a copy of the shared queue is maintained in the local storage of each application in each of the systems (see abstract and Col 1, lines 16-58)

Office Action, pages 4-5. There is no hint in this text of any teaching or suggestion by Le of the above limitation of claim 1.

*C. Claim 1 has limitations not taught by any reference.*

It is a longstanding rule that to establish a *prima facie* case of obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 143 (CCPA 1974). See MPEP § 2143.03. Because multiple limitations of claim 1 are not taught or suggested by the cited art, Applicant respectfully asserts that claim 1 defines over the cited art.

*D. Other Claims*

Independent claims 10, 28, and 37 are allowable for at least similar reasons as claim 1.

*E. Dependent Claims*

Applicant respectfully notes that claims 2, 5-8, 11, 14-16, 29, 32-35, 38, and 41-43 depend directly or indirectly from one of claims 1, 10, 28, or 37 and are therefore allowable for at least similar reasons. Applicant's position with respect to

claims 2, 5-8, 11, 14-16, 29, 32-35, 38, and 41-43 should not be understood as implying that no other reasons for the patentability of claims 2, 5-8, 11, 14-16, 29, 32-35, 38, and 41-43 exist. Applicant reserves the right to address these other reasons at a later date if needed.

*F. Other Rejections*

Claims 17, 21, 44, and 48 stand rejected over U.S. Pat. No. 7,290,178 ("Rothman") in view of Le. This rejection is respectfully traversed.

Rothman does not remedy the deficiencies of Le with respect to claim 1. Because independent claims 17 and 44 have similar limitations as claim 1, claims 17 and 44 are allowable for at least similar reasons as claim 1. Claims 21 and 48 depend from claims 17 and 44, respectively, and are therefore also in condition for allowance.

Claims 3, 12, 30, and 39 stand rejected over Shu in view of Baumberger, Le, and U.S. Pub. No. 2002/0089875 ("Miyauchi"). Claims 9 and 36 stand rejected over Shu in view of Baumberger, Le, and U.S. Pub. No. 2005/0174962 ("Gurevich"). Claims 19 and 46 stand rejected over Rothman in view of Le and Miyauchi. Claims 18, 22-26, 45, and 50-53 stand rejected over Rothman in view of Le and Shu. Claims 27 and 54 stand rejected over Rothman in view of Le and Gurevich. These rejections are respectfully traversed.

Neither Miyauchi nor Gurevich remedies the deficiencies of Shu, Baumberger, Le, and Rothman with respect to independent claims 1, 10, 17, 28, 37, and 44. Claims 3, 9, 12, 18-19, 22-27, 30, 36, 39, 45-46, and 50-54 ultimately depend from one of independent claims independent claims 1, 10, 17, 28, 37, and 44 and are therefore in condition for allowance for at least similar reasons. Applicant's position with respect to claims 3, 9, 12, 18-19, 22-27, 30, 36, 39, 45-46, and 50-54 should not be understood as implying that no other reasons for the patentability of claims 3, 9, 12, 18-19, 22-27, 30, 36, 39, 45-46, and 50-54 exist. Applicant reserves the right to address these other reasons at a later date if needed.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly addressed. For all of the reasons set forth above, Applicants submit that the application is in condition for allowance. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. By addressing particular positions taken by the Examiner in the above remarks, Applicants do not acquiesce to other positions that have not been explicitly addressed. In addition, Applicants' arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

If the Examiner believes that personal communication will allow any outstanding issues to be resolved, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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